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John Alson Hicks III

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EXAMINER

SALTARELLI, DOMINIC D

ART UNIT

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2421

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 09/749,825	Applicant(s) HICKS ET AL.	
	Examiner DOMINIC D. SALTARELLI	Art Unit 2421	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 November 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,5-14,36,39-46 and 52 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,5-14,36,39-46 and 52 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed November 24, 2010 have been fully considered but they are not persuasive.

First, applicant argues that Eames does not teach a set of interconnected buses, but rather a distinct set of separate buses, each carrying a distinct type of data.

In response, as shown in fig. 3 of Eames, each of the buses are coupled to each other via 'Network Interface Module 410'. Additionally, in Eames system, data is transferred from one bus to the next during the course of processing received content. For example, ATM data packets are transmitted and received along the ATM bus (Eames, fig. 3, col. 5, lines 8-15 and 44-50), which can be converted to MPEG packets and output along the MPEG bus (Eames, fig. 3, col. 5, lines 8-15).

Second, applicant argues Russo does not teach a mass storage device connected to a system data bus, contending that Russo teaches connecting the mass storage device to a video switch.

In response, notwithstanding that a bus is required to route incoming content from the video switch to storage device when it is already in digitally compressed form, there is a second disclosed path between the storage device and compression/decompression unit 112 (see Russo, fig. 2), which also requires a bus to route content to and from the storage device.

Third, applicant argues that the PIP processor of Meyer is not connected to a media bus and system data bus as claimed, instead outputting to a mixer of a picture enhancement processor.

In response, the rejection in view of Meyers has been amended to refer to fig. 1a as a whole. Rather than debate the minutiae of Meyer's overlay processing circuitry, it is sufficient to show that overlay processors with two distinct inputs and one output (received from buses, respectively) were known and in use at the time. As shown in fig. 1a of Meyer, there are two distinct inputs ('PIP video data in' and 'main video data in') and an output ('video data out') where the circuitry of fig. 1a functions receive these two inputs and merge the two to create an overlaid signal and output it for eventual display.

Further, due to an error on the examiner's part, claims 36, and 39-46 were unintentionally left out in the prior non-final office action. All of the claims have been addressed in the current, non-final office action.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 5-14, 36, 39-46, and 52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Humpleman (6,005,861, of record) in view of Eames et al.

(6,493,875, listed on the IDS filed 7/30/07) [Eames], Russo (6,732,366, of record), and Meyer et al. (4,809,069, of record) [Meyer].

Regarding claims 1, 36, 44, and 52, Humpleman discloses a system for providing digital entertainment data, the system comprising:

a processor and memory connected to a bus (a “master” set top box containing network interface units, routing received media through itself to the network, thus the processor and memory of this set top box are connected to the media bus the content is output to, col. 5, lines 20-25);

multiple pairs of tuner and demodulator with each pair receiving a plurality of information signals (network interface units 32, col. 9, lines 44-64);

decryption logic connected to the multiple tuner pairs to received encrypted digital information from the multiple pairs and produce decrypted digital information (col. 7, lines 55-57);

decoder logic connected to the decryption logic and receiving the decrypted digital information, the decoder logic reformatting the decrypted digital information and producing reformatted digital information (network interface units also perform any necessary error correction and formatting into Ethernet packets, col. 9, lines 44-64);

a data switch connected to the bus, the data switch receiving the information signals and sending the information signals to a plurality of switch ports (switch hub 38, shown in fig. 2, which comprises crossbar switch 44 which provides the switch ports that connect the devices, col. 5, lines 26-44) with a port

for sending high-bandwidth information signals from the data switch (such as for sending video information to set top equipment, see fig. 2); and

Humpleman fails to disclose a digital converter connected to the multiple pairs to receive analog information from the multiple pairs and to produce digital information, a system data bus connected to the media bus, a video overlay processor having a first input connected to the media bus, a second input connected the system data bus, and an output connected to the system data bus, the video overlay processor superimposing a first audio-visual signal over a second audio-video signal to produce a superimposed signal and sending the superimposed signal to the system data bus, a network bus connected to the system data bus and receiving the superimposed signal, and a mass storage device connected to the system data bus.

In an analogous art, Eames discloses a system for providing digital entertainment data (fig. 3), and teaches that it is well known to utilize several interconnected buses to route information within a gateway (col. 5, lines 26-36). Designation of the buses within the system is a largely arbitrary practice, since interconnected buses can be considered a single bus or a collection of buses equally well. Eames simply names buses according to the type of data which they transport.

It would have been obvious at the time to a person of ordinary skill in the art to modify the system disclosed by Humpleman to include plural interconnected buses as taught by Eames. While Humpleman clearly inherently

includes a bus to transport data from the network interface units to the hub, Eames is evidence that it is obvious to designate plural interconnected buses for the transport of data. Whether the buses in question are physically distinct and indirectly coupled or only separate in the abstract sense cannot be determined, as the claimed media bus, system data bus, and network bus are disclosed in a sufficiently vague manner to include both possibilities (see fig. 6 of the originally filed disclosure). Either case is obvious and well known in view of the prior art, as the sole purpose of a bus is simply to transport data between circuits.

Humpleman and Eames fail to disclose a digital converter connected to the multiple pairs to receive analog information from the multiple pairs and to produce digital information, a video overlay processor having a first input connected to the media bus, a second input connected the system data bus, and an output connected to the system data bus, the video overlay processor superimposing a first audio-visual signal over a second audio-video signal to produce a superimposed signal and sending the superimposed signal to the system data bus, and a mass storage device connected to the system data bus.

In an analogous art, Russo discloses a system for providing digital entertainment data (fig. 2) including a mass storage device coupled to a system data bus and storing information signals (fig. 2, storage 110, col. 7, lines 36-50), providing the benefit of stored programming for later playback (col. 3, lines 9-21).

It would have been obvious at the time to a person of ordinary skill in the art to modify the system disclosed by Humpleman and Eames to include a mass

storage device coupled to the system data bus and storing the information signals, as taught by Russo, for the benefit of stored programming for later playback.

Humpleman, Eames, and Russo fail to disclose a digital converter connected to the multiple pairs to receive analog information from the multiple pairs and to produce digital information, a video overlay processor having a first input connected to the media bus, a second input connected to the system data bus, and an output connected to the system data bus, the video overlay processor superimposing a first audio-visual signal over a second audio-video signal to produce a superimposed signal and sending the superimposed signal to the system data bus.

In an analogous art, Meyer discloses a system for providing digital entertainment data that includes an overlay processor superimposing multiple information signals onto a first information signal (fig. 1a, col. 1, lines 19-27), providing the benefit of allowing a user to view several sources of video on a screen simultaneously.

It would have been obvious at the time to a person of ordinary skill in the art to modify the system disclosed by Humpleman, Eames, and Russo to include an overlay processor superimposing multiple information signals onto a first information signal, as taught by Meyer, for the benefit of allowing a user to view several sources of video on a screen simultaneously. A PIP processor has two inputs and one output (the two inputs being the main image and secondary

image, with the single output being the combined image), and arbitrarily naming the portions of the bus which each input and output is connected to is a matter of semantics that does not affect of the structure of the invention (since physically, there is only a single bus, as disclosed by applicant's originally filed specification, see fig. 6).

Humpleman, Eames, Russo, and Meyer fail to disclose a digital converter connected to the multiple pairs to receive analog information from the multiple pairs and to produce digital information.

The examiner takes official notice that the use of analog-to-digital converters are notoriously well known in the art. Humpleman teaches that some of the sources accessed by the NIUs are analog transmissions, as some of the receiver equipment utilize analog signals (Humpleman, col. 6 line 59 - col. 7 line 4), but singles out such a situation as being exceptional and not part of the digital network. But since A/D converters are so widely known, it would have been obvious to one of ordinary skill in the art to modify Humpleman to include said converters so that said analog transmissions could also be included in the digital network, remedying the problem highlighted by Humpleman.

Regarding claims 5, 6, 39-41, 43, and 46, Humpleman, Eames, Russo, and Meyer disclose the system of claims 1 and 36, wherein a mass storage device stores an item identifier corresponding to each stored content item, the item identifier having a value that indicates the content item has been played (for

pay-per-play usage, Russo, col. 5, lines 12-21), another value indicated the content items has been purchased (for open ended usage, Russo, col. 5, lines 45-58), a third value indicating the content item has been licensed (available for viewing, Russo, col. 5 line 59 - col. 6 line 9), a cost of playback for each content item (to debit the account for pay-per-play usage, Russo, col. 10, lines 33-34) and a second cost of purchase for each content item (to debit the account for open ended usage, Russo, col. 10, lines 33-34), and further disclose storing in memory a browser based graphical user interface, which upon instruction from the client device, a processor sends the graphical user interface to the client device with the graphical user interface describing the content items stored in the memory, the processor receiving a command from the client device issued by a remote control, and the processor retrieving another instruction from the memory that is associated with the command issued by the remote control (the system provides a browser based user interface which provides information regarding program usage indicators and other descriptive data, granting access to stored and otherwise available programming, col. 5 line 59 - col. 6 line 9 and col. 10 line 59 - col. 11 line 15). The examiner recognizes that the pay-per-play and open ended, or 'rental' paradigm, uses are disclosed as alternative embodiments in Russo, however, they are not mutually exclusive and therefore both included when Humpleman and Eames are modified in view of Russo's disclosure to include the mass storage device.

Regarding claims 7, 8, and 42, Humpleman, Eames, Russo, and Meyer disclose the system of claims 1 and 36, but fail to disclose a card reader for authorizing the decryption of pay-per-view and other digital information received by the decryption logic from the multiple pairs.

Examiner takes official notice that the use of so called "smart cards" to authorized access to encrypted television programming is notoriously well known in the art, said cards having preprogramming access control information (such as decryption keys) that are inserted into a set top device to enable said device to decrypt particular transmissions using the information on the card. Said cards are used to ensure that only the bearer of the card is able to access encrypted content, which is more secure than sending decryption information over the network where it could be intercepted by an unauthorized user.

It would have been obvious at the time to a person of ordinary skill in the art to modify the system of Humpleman, Eames, Russo, and Meyer to include a card reader for authorizing the decryption of pay-per-view and other digital information received by the decryption logic from the multiple pairs.

Regarding claim 9, Humpleman, Eames, Russo, and Meyer disclose the system of claim 8, further comprising decoder logic connected to the media bus (Humpleman teaches the network interface units that are located at the gateway device perform all necessary decoding functions [decryption, access control,

demultiplexing, etc...] prior to transmission over the bus to the switch, col. 7, lines 55-65).

Regarding claims 10-14, Humpleman, Eames, Russo, and Meyer disclose the system of claim 9, wherein the plurality of transmission signals include a plurality of television program signals (digital or mixed analog/digital broadcast signals), an audio signal (compressed audio), a data signal (Internet data), are received from a cable headend or direct broadcast satellite (cable provider or digital satellite service), and are frequency divided multiplex transmission signals (as is conventional for cable and satellite television broadcast services, Humpleman, col. 3, lines 21-35).

Regarding claim 45, Humpleman, Eames, Russo, and Meyer disclose the method of claim 36, wherein the data switch is a router (Humpleman, col. 5, lines 50-59).

Conclusion

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DOMINIC D. SALTARELLI whose telephone number is (571)272-7302. The examiner can normally be reached on Monday - Friday 9:00am - 6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Miller can be reached on (571) 272-7353. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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/Dominic D Saltarelli/
Primary Examiner, Art Unit 2421